THAT WHICH IS CLAIMED IS:

1.   A method of distributing workload between a plurality of data processing systems in a cluster of data processing systems, wherein each of the plurality of data processing systems is executing an instance of an application which communicates over a network such that a connection request to the application may be distributed to any one of the plurality of data processing systems, the method comprising:

defining a subset of the plurality of data processing systems which are to receive connection requests to the application having at least one predefined characteristic;

receiving a request for a connection to the application over the network;

determining if the request has a characteristic corresponding to the at least one predefined characteristic associated with the subset of the plurality of data processing systems; and

distributing the request to one of the subset of the plurality of data processing systems if the request has a characteristic corresponding to the at least one predefined characteristic.

2.   A method according to Claim 1, further comprising the step of distributing the request to a data processing system of the plurality of data processing systems other than a data processing system in the subset of data processing systems if the request does not have a

characteristic corresponding to the at least one predefined characteristic.

3. A method according to Claim 1, wherein the characteristic comprises a client identification associated with the request.

4. A method according to Claim 1, further comprising the steps of:

determining the availability of data processing systems in the subset of the plurality of data processing systems; and

determining if the availability of at least one of the data processing systems in the subset of the plurality of data processing systems meets an availability criteria; and

wherein the step of distributing the request to one of the subset of the plurality of data processing systems if the request has a characteristic corresponding to the at least one predefined characteristic of the subset of the plurality of data processing systems comprises distributing the request to at least one of the data processing systems in the subset of the plurality of data processing systems which meets the availability criteria if it is determined that at least one of the data processing systems in the subset of the plurality of data processing systems meets the availability criteria.

5. A method according to Claim 4, further comprising the step of distributing the request to a data processing system of the plurality of data processing

systems other than a data processing system in the subset
of data processing systems if the request has a
characteristic corresponding to the at least one
predefined characteristic of the subset of the plurality
5   of data processing systems and at least one of the subset
of the plurality of data processing systems does not have
an availability which meets the availability criteria.

6.   A method according to Claim 4, further
10   comprising the step of rejecting the request if the
request has a characteristic corresponding to the at
least one predefined characteristic of the subset of the
plurality of data processing systems and at least one of
the subset of the plurality of data processing systems
15   does not have an availability which meets the
availability criteria.

7.   A method according to Claim 4, further
comprising the steps of:
20   determining an availability of data processing
systems other than data processing systems in the subset
of data processing systems; and
distributing the request to a data processing system
of the plurality of data processing having the best
25   availability if the request has a characteristic
corresponding to the at least one predefined
characteristic of the subset of the plurality of data
processing systems and at least one of the subset of the
plurality of data processing systems does not have an
30   availability which meets the availability criteria.

8.   A method according to Claim 1, wherein the step of defining a subset of the plurality of data processing systems comprises the step of including in the subset of the plurality of data processing systems, data processing systems having common operational characteristics.

9.   A method according to Claim 1, wherein the data processing systems comprise communication protocol stacks bound to the application in an OS/390 Sysplex and wherein the subset of the plurality of data processing systems comprise a subset of the communication protocol stacks bound to the application.

10.   A method according to Claim 9, wherein the steps of defining, receiving, determining and distributing are carried out by a routing communication protocol stack.

11.   A system distributing workload between a plurality of data processing systems in a cluster of data processing systems, wherein each of the plurality of data processing systems is executing an instance of an application which communicates over a network such that a connection request to the application may be distributed to any one of the plurality of data processing systems, comprising:

means for defining a subset of the plurality of data processing systems which are to receive connection requests to the application having at least one predefined characteristic;

means for receiving a request for a connection to the application over the network;

means for determining if the request has a characteristic corresponding to the at least one predefined characteristic associated with the subset of the plurality of data processing systems; and

means for distributing the request to one of the subset of the plurality of data processing systems if the request has a characteristic corresponding to the at least one predefined characteristic.

12. A system according to Claim 11, further comprising means for distributing the request to a data processing system of the plurality of data processing systems other than a data processing system in the subset of data processing systems if the request does not have a characteristic corresponding to the at least one predefined characteristic.

13. A system according to Claim 11, wherein the characteristic comprises a client identification associated with the request.

14. A system according to Claim 11, further comprising:

means for determining the availability of data processing systems in the subset of the plurality of data processing systems; and

means for determining if the availability of at least one of the data processing systems in the subset of

the plurality of data processing systems meets an availability criteria; and

wherein the means for distributing the request to one of the subset of the plurality of data processing systems if the request has a characteristic corresponding to the at least one predefined characteristic of the subset of the plurality of data processing systems comprises means for distributing the request to at least one of the data processing systems in the subset of the plurality of data processing systems which meets the availability criteria if it is determined that at least one of the data processing systems in the subset of the plurality of data processing systems meets the availability criteria.

15. A system according to Claim 14, further comprising means for distributing the request to a data processing system of the plurality of data processing systems other than a data processing system in the subset of data processing systems if the request has a characteristic corresponding to the at least one predefined characteristic of the subset of the plurality of data processing systems and at least one of the subset of the plurality of data processing systems does not have an availability which meets the availability criteria.

16. A system according to Claim 14, further comprising means for rejecting the request if the request has a characteristic corresponding to the at least one predefined characteristic of the subset of the plurality of data processing systems and at least one of the subset

of the plurality of data processing systems does not have an availability which meets the availability criteria.

17. A system according to Claim 14, further comprising:

means for determining an availability of data processing systems other than data processing systems in the subset of data processing systems; and

means for distributing the request to a data processing system of the plurality of data processing having the best availability if the request has a characteristic corresponding to the at least one predefined characteristic of the subset of the plurality of data processing systems and at least one of the subset of the plurality of data processing systems does not have an availability which meets the availability criteria.

18. A system according to Claim 11, wherein the means for defining a subset of the plurality of data processing systems comprises means for including in the subset of the plurality of data processing systems, data processing systems having common operational characteristics.

19. A system according to Claim 11, wherein the data processing systems comprise communication protocol stacks to which the application is bound in an OS/390 Sysplex and wherein the subset of the plurality of data processing systems comprise a subset of the communication protocol stacks bound to the application.

20. A system according to Claim 19, wherein the means for defining, means for receiving, means for determining and means for distributing comprise a routing communication protocol stack.

21. A computer program product of distributing workload between a plurality of data processing systems in a cluster of data processing systems, wherein each of the plurality of data processing systems is executing an instance of an application which communicates over a network such that a connection request to the application may be distributed to any one of the plurality of data processing systems, comprising:

a computer readable storage medium having computer readable program code embodied therein, the computer readable program code comprising:

computer readable program code which defines a subset of the plurality of data processing systems which are to receive connection requests to the application having at least one predefined characteristic;

computer readable program code which receives a request for a connection to the application over the network;

computer readable program code which determines if the request has a characteristic corresponding to the at least one predefined characteristic associated with the subset of the plurality of data processing systems; and

computer readable program code which distributes the request to one of the subset of the plurality of data processing systems if the request has a characteristic

corresponding to the at least one predefined characteristic.

22. A computer program product according to Claim 21, further comprising computer readable program code which distributes the request to a data processing system of the plurality of data processing systems other than a data processing system in the subset of data processing systems if the request does not have a characteristic corresponding to the at least one predefined characteristic.

23. A computer program product according to Claim 21, wherein the characteristic comprises a client identification associated with the request.

24. A computer program product according to Claim 21, further comprising:
computer readable program code which determines the availability of data processing systems in the subset of the plurality of data processing systems; and
computer readable program code which determines if the availability of at least one of the data processing systems in the subset of the plurality of data processing systems meets an availability criteria; and
wherein the computer readable program code which distributes the request to one of the subset of the plurality of data processing systems if the request has a characteristic corresponding to the at least one predefined characteristic of the subset of the plurality of data processing systems comprises computer readable

program code which distributes the request to at least one of the data processing systems in the subset of the plurality of data processing systems which meets the availability criteria if it is determined that at least one of the data processing systems in the subset of the plurality of data processing systems meets the availability criteria.

25. A computer program product according to Claim 24, further comprising computer readable program code which distributes the request to a data processing system of the plurality of data processing systems other than a data processing system in the subset of data processing systems if the request has a characteristic corresponding to the at least one predefined characteristic of the subset of the plurality of data processing systems and at least one of the subset of the plurality of data processing systems does not have an availability which meets the availability criteria.

26. A computer program product according to Claim 24, further comprising computer readable program code which rejects the request if the request has a characteristic corresponding to the at least one predefined characteristic of the subset of the plurality of data processing systems and at least one of the subset of the plurality of data processing systems does not have an availability which meets the availability criteria.

27. A computer program product according to Claim 24, further comprising:

computer readable program code which determines an availability of data processing systems other than data processing systems in the subset of data processing systems; and

5   computer readable program code which distributes the request to a data processing system of the plurality of data processing having the best availability if the request has a characteristic corresponding to the at least one predefined characteristic of the subset of the

10   plurality of data processing systems and at least one of the subset of the plurality of data processing systems does not have an availability which meets the availability criteria.

15   28. A computer program product according to Claim 21, wherein the computer readable program code which defines a subset of the plurality of data processing systems comprises means for including in the subset of the plurality of data processing systems, data processing

20   systems having common operational characteristics.

     29. A computer program product according to Claim 21, wherein the data processing systems comprise communication protocol stacks to which the application is

25   bound in an OS/390 Sysplex and wherein the subset of the plurality of data processing systems comprise a subset of the communication protocol stacks bound to the application.

30   30. A computer program product according to Claim 29, wherein the computer readable program code which

defines, computer readable program code which receives,
computer readable program code which determines and
computer readable program code which distributes comprise
computer readable program code which provides a routing

5   communication protocol stack.